

REMARKS/ARGUMENTS

In the Office Action dated June 17, 2005, claims 1-26 were rejected. Applicant has thoroughly reviewed the outstanding Office Action, including the Examiner's remarks and the references cited therein.

Claims 27-39 had previously been cancelled. Upon entry of the present Amendment, claims 1-26 and 40 will be pending in the present application. Claims 1 and 14 are independent claims. Claims 2-13 and 15-26 have been amended to more distinctly claim and clearly distinguish the present invention relative to the references cited in the outstanding Office Action. New claim 40 has been added and the subject matter recited therein could previously be found at least in claim 27 of the as-filed application. No new matter has been added.

The above claim amendments and the following remarks are believed to be fully responsive to the final Office Action. All of the pending claims at issue are believed to be patentable over the cited references.

Applicant wishes to clarify the remarks made on page 14 of the Amendment Under 37 CFR §1.111 filed April 29, 2005. More specifically, Applicant wishes to make clear that those remarks in regards to the phrase, "substantially equivalent," were made in line with M.P.E.P. §2173.05(h), which is cited therein. In view of the above, "substantially equivalent," relates to, "materials set forth in the Markush group ordinarily must belong to a recognized physical or chemical class or to an art-recognized class," as recited in M.P.E.P. §2173.05(h). Applicant emphasizes that it is only agreed that the refrigerants included in each of the Markush groups recited in the claims of the present application are within an art-recognized class.

Rejection of Claims 1-26 Under 35 U.S.C. §102(e) or, in the Alternative, Under 35 U.S.C. §103(a) over U.S. Patent No. 6,502,410 B2 to Podtchereniaev et al.:

Claims 1-26 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,502,410 B2 to Podtchereniaev et al. (Podtchereniaev '410) or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Podtchereniaev '410. In the Office Action, it is alleged that the number of permutations disclosed in the figures is sufficiently small that the recited combination would be "immediately envisaged" by the person of ordinary skill in the refrigerant art. Alternatively, it is also alleged in the Office Action that it would have been obvious at the time of the invention was made to make the elected composition, because it is further alleged that Podtchereniaev '410 discloses that such a composition can be made using the recited constituents with no additional mandatory constituents. In addition, it is also alleged in the Office Action that, where specific refrigerants are not disclosed, Applicant has admitted on the record that it would be obvious to substitute any of the other refrigerants within the group disclosed by the Applicant. It is even further alleged in the Office Action that, accordingly, disclosure in the prior art of any of the refrigerants in any such group renders the others obvious. The rejection of claims 1-26 under 35 U.S.C. §102(e) and the rejection of claims 1-26 under 35 U.S.C. §103(a) over Podtchereniaev '410 are both respectfully traversed.

Podtchereniaev '410 discloses, in FIG. 7 thereof, a mixed refrigerant (MR) formulation for minimal temperature down to 118 K. Podtchereniaev '410 also discloses, in FIG. 8 thereof, an MR formulation for minimal temperature above 130 K.

However, Podtchereniaev '410 fails to disclose or suggest methods for making any of the formulations recited disclosed in FIG. 7 or FIG. 8. At least for this reason, Applicant

respectfully submits that Podtchereniaev ‘410 fails to disclose or suggest at least “adding non-hydrochlorofluorocarbon refrigerants to refrigerant R740,” as recited in claim 1 of the present application.

In addition to the above, Podtchereniaev ‘410 also fails to disclose or suggest at least R116, R290, RC318, R508a, R508b, R600, R600a and R1150 refrigerants. Since at least one Markush group recited in each of claims 2-13 and 15-26 is made up exclusively of members of this list of refrigerants, Applicant respectfully submits that Podtchereniaev ‘410 fails to disclose or suggest any of the compositions of the mixtures recited in claims 2-13 and 15-26.

At least in view of the remarks made above, reconsideration and withdrawal of the rejection of claims 1-26 under 35 U.S.C. §102(e) as being anticipated by Podtchereniaev ‘410 or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Podtchereniaev ‘410 is respectfully requested.

Rejection of Claims 1-26 Under 35 U.S.C. §102(e) or, in the Alternative, Under 35 U.S.C. §103(a) over U.S. Patent No. 6,560,981 B2 to Flynn:

Claims 1-26 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,560,981 B2 to Flynn (Flynn ‘981) or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Flynn ‘981. In the Office Action, it is alleged that the number of permutations disclosed in the table is sufficiently small that the recited combination would be “immediately envisaged” by the person of ordinary skill in the refrigerant art. Alternatively, it is also alleged in the Office Action that it would have been obvious at the time that the invention was made to make the elected composition, because it is further alleged that Flynn ‘981 discloses

that such a composition can be made using the recited constituents with no additional mandatory constituents. The rejection of claims 1-26 under 35 U.S.C. §102(e) and the rejection of claims 1-26 under 35 U.S.C. §103(a) over Flynn '981 are both respectfully traversed.

Flynn '981 discloses, in Table 1 thereof, a plurality of "Refrigerant Compositions." However, Flynn '981 fails to disclose or suggest methods for making any of the formulations disclosed in Table 1 thereof. At least for this reason, Applicant respectfully submits that Flynn '981 fails to disclose or suggest at least "adding non-hydrochlorofluorocarbon refrigerants to refrigerant R740," as recited in claim 1 of the present application.

In addition to the above, Flynn '981 also fails to disclose or suggest at least R116, R290, RC318, R508a, R508b, R600, R600a and R1150 refrigerants. Since at least one Markush group recited in each of claims 2-13 and 15-26 of the present application is made up exclusively of members of this list of refrigerants, Applicant respectfully submits that Flynn '981 fails to disclose or suggest any of the compositions of the mixtures recited in claims 2-13 and 15-26 of the present application.

At least in view of the remarks made above, reconsideration and withdrawal of the rejection of claims 1-26 under 35 U.S.C. §102(e) as being anticipated by Flynn '981 or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Flynn '981 is respectfully requested.

CONCLUSION

At least in view of the foregoing remarks, Applicant respectfully requests the withdrawal of all of the rejections included in the outstanding Office Action. If, for any reason, the Examiner disagrees, please call the undersigned agent at 202-861-1718 in an effort to resolve

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any matter still outstanding before issuing another action. The undersigned agent is confident that any issue which might remain can readily be worked out by telephone.

In the event this paper is not time filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036.

Respectfully submitted,

BAKER & HOSTETLER LLP



Hermes M. Soyez
Reg. No. 45,852

Date: October 17, 2005
Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5304
Telephone: 202-861-1500
Facsimile: 202-861-1783